

Amendments to the Claims

Please amend Claims 2, 4-6, 9-11, 13, 15-17, 19, 22, 25, 27-29, 31 and 34-35. Please cancel Claims 1, 3, 8, 12, 14, 23-24 and 26. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1. (Cancelled)
2. (Currently Amended) ~~The method as claimed in Claim 1 further comprising the step of:~~ A method implemented in a network file server contained in a data network for providing a trunk, comprising the steps of:
 - providing a trunk having a plurality of communications ports;
 - coupling the plurality of communications ports to a switch;
 - assigning ownership of the plurality of communications ports to a first virtual device;
 - setting a network address associated with the first virtual device to a first network address, the first network address assigned to a first communications port;
 - setting network addresses for the remaining plurality of communications ports to the trunk network address associated with the first virtual device;
 - upon receiving a data packet from the data network by any of the communications ports in the trunk, forwarding the data packet to the first virtual device; and
 - allocating a plurality of device structures, the device structures allocated for each of the plurality of communications ports, each device structure including an owner field.
3. (Cancelled)
4. (Currently Amended) ~~The method as claimed in Claim 3 wherein the step of forwarding comprises the step of:~~ A method implemented in a network file server contained in a data network comprising the steps of:

providing a trunk having a plurality of communications ports;
coupling the plurality of communications ports to a switch;
assigning ownership of the plurality of communications ports coupled to a first
virtual device;
setting a network address associated with the first virtual device to a first network
address, the first network address assigned to a first communications port;
setting network addresses for the remaining plurality of communications ports to
the network address associated with the first virtual device;
upon receiving a data packet from the data network by a communications port in
the plurality of communications ports in the trunk, forwarding the data packet to the first
virtual device; and
allocating a plurality of device structures, the device structures allocated for each
of the plurality of communications ports, each device structure including an owner field,
wherein the step of assigning ownership further comprises the step of:
storing a pointer to a virtual device structure allocated for the first virtual
device in the owner field in each of the device structures allocated for the plurality
of communications ports, and
wherein the step of forwarding further comprises the steps of:
 examining the contents of the owner field in the ~~virtual~~ device structure
 allocated to the communications port that is receiving the data packet; and
 selecting the first virtual ~~network~~ device pointed to by the pointer stored in
 the owner field.

5. (Currently Amended) The method as claimed in Claim ~~[[1]]~~ 2 further comprising the ~~step~~
steps of:

upon receiving a data packet ~~[[,]]~~ destined for the data network at the first virtual
device; and by the virtual network device to be transmitted to the trunk;
 transmitting the data packet through one of the plurality of communications ports
in the trunk.

6. (Currently Amended) The method as claimed in Claim 5 further comprising the step of:
selecting ~~the~~ one of the plurality of communications ports for transmitting the data packet dependent on the result of an exclusive OR operation on a portion of a source network address and a destination network address.
7. (Original) The method as claimed in Claim 6 wherein the portion of the source network address and the destination network address are dependent on a number of communications ports in the trunk.
8. (Cancelled)
9. (Currently Amended) ~~The method as claimed in Claim 8~~ A method implemented in a network file server contained in a data network for providing a trunk, comprising the steps of:
providing a trunk having a plurality of communications ports;
coupling the plurality of communications ports to a switch;
assigning ownership of the plurality of communications ports to a first virtual device;
setting a network address associated with the first virtual device to a first network address, the first network address assigned to a first communications port;
setting network addresses for the remaining plurality of communications ports to the network address associated with the first virtual device; and
upon receiving a data packet from the data network by any of the communications ports in the trunk, forwarding the data packet to the first virtual device,
wherein the network address associated with the first virtual device is a data link layer address, and
wherein the data link layer address is an Ethernet address.
10. (Currently Amended) The method as claimed in Claim ~~[[8]]~~ 9 wherein the data link layer address is an IEEE 802.3 address.

11. (Currently Amended) The method as claimed in Claim 10 further comprising the steps of:
 - assigning ownership of a second plurality of communications ports coupled to a second switch to a second virtual ~~network~~ device;
 - assigning ownership of the first virtual ~~network~~ device and the second virtual ~~network~~ device to a third virtual ~~network~~ device;
 - setting a failsafe network device address associated with a failsafe network device to the ~~trunk~~ network address associated with the first virtual device;
 - setting network addresses assigned to the second plurality of communications ports to the failsafe network device address;
 - setting ~~[[a]] the virtual~~ network address assigned to the first virtual device and a network address assigned to the second virtual ~~network~~ devices to the failsafe network device address; and
 - upon receiving a data packet from the data network for the failsafe network device address by a communications port in any of the plurality of communications ports in the trunk, forwarding the data packet to the failsafe network ~~third virtual network~~ device.
12. (Cancelled)
13. (Currently Amended) ~~The network file server as claimed in Claim 12 further comprising:~~
A network file server contained in a data network comprising:
 - a plurality of communications ports coupled to a switch;
 - a trunk configuration routine which creates a virtual device for the plurality of communications ports, sets a network address associated with the virtual device to a first network address assigned to a first communications port and sets network addresses for the remaining communications ports in the plurality of communications ports to the network address associated with the virtual device;
 - an owner routine, which selects the virtual device associated with the network address for a data packet received by any of the communications ports in the trunk; and
 - a device driver which allocates a device structure for each of the plurality of communications ports, each device structure including an owner field.

14. (Cancelled)

15. (Currently Amended) ~~The network file server as claimed in Claim 14~~ A network file server contained in a data network comprising:

a plurality of communications ports coupled to a switch;

a trunk configuration routine which creates a virtual device for the plurality of communications ports, sets a network address associated with the first virtual device to a first network address assigned to a first communications port, sets network addresses for the remaining communications ports in the plurality of communications ports to the network address associated with the first virtual device, and allocating a device structure for each of the plurality of communications ports; and

an owner routine which selects the virtual device associated with the network address associated with the first virtual device for a data packet received by any of the plurality of communications ports in the trunk,

wherein the trunk configuration routine allocates a device structure for the first virtual device and stores a pointer to the device structure allocated for the first virtual device in an owner field in each of a plurality of device structures allocated for the plurality of communications ports, and

wherein the owner routine examines the contents of the owner field in the device structure allocated to a communications port in the plurality of communications ports receiving ~~[[the]]~~ a data packet and selects the first virtual device pointed to by the pointer stored in the owner field.

16. (Currently Amended) The network file server as claimed in Claim ~~[[14]]~~ 15 further comprising:

a virtual device driver which selects one of the plurality of communications ports through which to transmit a data packet on the trunk.

17. (Currently Amended) The network file server as claimed in Claim 16 wherein the virtual device driver selects ~~the~~ one of the plurality of communications ports dependent on the result of an exclusive OR operation on a portion of a source network address and a destination network address.
18. (Original) The network file server as claimed in Claim 17 wherein the portion of the source network address and the destination network address are dependent on a number of communications ports in the trunk.
19. (Currently Amended) The network file server as claimed in Claim ~~[[14]]~~ 15 wherein the ~~trunk~~ network address associated with the first virtual device is a data link layer address.
20. (Original) The network file server as claimed in Claim 16 wherein the data link layer address is an Ethernet address.
21. (Original) The network file server as claimed in Claim 20 wherein the data link layer address is an IEEE 802.3 address.
22. (Currently Amended) The network file server as claimed in Claim 21 wherein the trunk configuration routine assigns ownership of a second plurality of communications ports coupled to a second switch to a second virtual ~~network~~ device, and assigns ownership of the first virtual ~~network~~ device and the second virtual ~~network~~ device to a third virtual ~~network~~ device.
- 23.-24.(Cancelled)
25. (Currently Amended) ~~The network file server as claimed in Claim 24 further comprising:~~
A network file server comprising:
a plurality of communications ports coupled to a switch;

means for providing a trunk, the trunk including the plurality of communications ports, by assigning ownership of the plurality of communications ports to a virtual device;

means for setting a network address associated with the virtual device to a first network address assigned to a first communications port, and for setting network addresses for the remaining plurality of communications ports to the network address associated with the virtual device;

means for forwarding a received data packet from a data network, the received data packet having been received by a communications port in the plurality of communications ports in the trunk, the received data packets being forwarded to the virtual device; and

means for allocating a plurality of device structures, the device structures allocated for each of the plurality of communications ports, each device structure including an owner field.

26. (Cancelled)

27. (Currently Amended) ~~The network file server as claimed in Claim 26~~ A network file server contained in a data network comprising:

a plurality of communications ports coupled to a switch;

means for providing a trunk including the plurality of communications ports by assigning ownership of the plurality of communications ports to a first virtual device;

means for setting a network address associated with the first virtual device to a first network address, the first network address assigned to a first communications port;

means for setting network addresses for the remaining plurality of communications ports to the network address;

means for forwarding a data packet received from the data network by a communications port in the plurality of communications ports in the trunk to the first virtual device; and

means for allocating a plurality of device structures, the device structures allocated for each of the plurality of communications ports, each device structure including an owner field,

wherein the trunk configuration routine further comprises:

means for storing a pointer to a device structure allocated for the first virtual device in the owner field in each of the device structures allocated for the plurality of communications ports, and

wherein the means for forwarding further comprises:

means for examining the contents of the owner field in the device structure allocated to a communications port in the plurality of communications ports receiving ~~[[the]]~~ a data packet; and

means for selecting the first virtual device pointed to by the pointer stored in the owner field so examined.

28. (Currently Amended) The network file server as claimed in Claim ~~[[26]]~~ 27 further comprising:

~~upon~~ means for receiving a data packet destined for the data network at the first virtual device; and ~~, by the virtual network device to be transmitted to the trunk,~~

means for transmitting the data packet through one of the plurality of communications ports in the trunk.

29. (Currently Amended) The network file server as claimed in Claim 28 wherein the means for transmitting

selects ~~[[the]]~~ one of the plurality of communications ports dependent on the result of an exclusive OR operation on a portion of a source network address and a destination network address.

30. (Original) The network file server as claimed in Claim 29 wherein the portion of the source network address and the destination network address are dependent on a number of communications ports in the trunk.

31. (Currently Amended) The network file server as claimed in Claim [[26]] 27 wherein the ~~trunk~~ network address associated with the first virtual device is a data link layer address.
32. (Previously Presented) The network file server as claimed in Claim 31 wherein the data link layer address is an Ethernet address.
33. (Previously Presented) The network file server as claimed in Claim 31 wherein the data link layer address is an IEEE 802.3 address.
34. (Currently Amended) The network file server as claimed in Claim [[26]] 27 further comprising:
 - a second plurality of communications ports coupled to a second switch wherein the means for providing provides a second trunk including the second plurality of communications ports by assigning ownership of the second plurality of communications ports to a second virtual ~~network~~ device; and means for assigning ownership of the first virtual ~~network~~ device and the second virtual network device to a third virtual network device.
35. (Currently Amended) The network file server as claimed in Claim 22 wherein the trunk ~~configurator~~ configuration routine further sets a failsafe network device address associated with a failsafe network device to the ~~trunk~~ network address associated with the first virtual device, and sets a virtual ~~network~~ address assigned to the first virtual ~~network~~ device to the failsafe network device address.
36. (Previously Presented) The network file server as claimed in Claim 34 wherein the means for setting a trunk network address further sets a failsafe network device address to the trunk network address, and sets a virtual network address assigned to the virtual network device to the failsafe network device address.